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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering	Rulemaking 14-07-002 (Filed July 10, 2014)

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) RESPONSE AND OPENING COMMENTS ON ADMINISTRATIVE LAW JUDGE'S RULING SEEKING PROPOSALS AND COMMENTS ON IMPLEMENTATION OF ASSEMBLY BILL 693

RANDALL J. LITTENEKER
STACY W. WALTER

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-2179
Facsimile: (415) 973-0516
E-Mail: rjl9@pge.com

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

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I. INTRODUCTION

Pacific Gas and Electric Company (PG&E) submits these opening comments and a proposal in response to Administrative Law Judge (ALJ) Simon's *Ruling Seeking Proposals and Comments on Implementation of Assembly Bill 693* (Ruling), issued on July 8, 2016. PG&E appreciates the opportunity provide these comments and offer a proposal for a low-income solar program for consideration.

In the Proposal section of this filing, PG&E presents an overview of its recommendations on the major policy questions to be addressed. Further details can be found in the Responses to Questions in the section that follows.

II. PG&E'S PROPOSAL

A. Overview

In this filing, PG&E proposes to leverage its successful experience administering the Multifamily Affordable Solar Housing (MASH) program to ensure the newly established, and similar in many aspects, AB 693 Multifamily Affordable Housing Solar Roofs (MAHSR) program further expands solar access to low-income customers. By leveraging the successful aspects of MASH and updating areas that could be improved, PG&E is confident the new

program will allow many more low-income customers in its service territory to benefit from on-site renewable solar PV by way of up-front incentives.

B. PG&E Should Administer the Program In its Service Area

PG&E is eminently qualified and should be the Program Administer for its customers. It has successfully administered the MASH program, which served as a model for this program. Our participation has been high and our administrative costs have been low. Our administrative costs have remained below CPUC-set caps every year that the program has existed and when MASH was renewed with new incentive levels set, the administrative cap was reduced from 12% to 7% due to the IOUs' ability to reduce administrative costs, thus enabling more money to be allocated towards incentives and allowing the program to positively affect more low-income tenants. In addition, PG&E has long administered the NEMVMASH tariff, which is the primary vehicle for ensuring that the low-income tenants receive the benefits of the program. The advantages of PG&E administration and disadvantages of third party administration are discussed more fully in our response to Question 17 below.

C. Eligible Multifamily Housing Definition

AB 693 is prescriptive and detailed in describing which types of housing will be eligible for incentives to install qualifying solar systems. Specifically, AB 693 states: (3) "Qualified multifamily affordable housing property" means a multifamily residential building of at least five rental housing units that is operated to provide deed-restricted low-income residential housing, as defined in clause (i) of subparagraph (A) of paragraph (3) of subdivision (a) of Section 2852, and that meets one or more of the following requirements:

> (A) The property is located in a disadvantaged community, as identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code.

(B) At least 80 percent of the households have incomes at or below 60 percent of the area median income, as defined in subdivision (f) of Section 50052.5 of the Health and Safety Code.

The definitions of these provisions have been provided by the relevant state agencies. The definition of "disadvantaged community" pursuant to section 39711 was last defined by the California EPA in 2014, picking "Method 1, a Combined Pollution and Population Characteristic" screen using the CalEnviroScreen, and using the 25% threshold at this time. The result, including maps, is available at

http://www.calepa.ca.gov/EnvJustice/GHGInvest/Documents/SB535DesCom.pdf .

The "area median income" per section 50052.5(f) was last updated by the California Department of Housing and Community Development in May 2016, at

http://www.hcd.ca.gov/housing-policy-development/housing-resource-center/reports/state/incnote.html.

These two topics are discussed in more detail in response to Question 2 below.

D. Documentation of Eligibility

A prospective property (host-customer) applying for incentives will need to provide the program administrator with documentation to ensure said property meets either or both of the above requirements. Similar to the MASH program, host-customers seeking incentives will need to submit the following in order to ensure compliance with property requirements, which come from the current MASH handbook.

Multifamily residential projects proving low-income status per Public Utilities Code Section 2852, applicants must provide documentation that meets one of the following:

1) For a Multifamily residential complex that is financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state or federal loans or grants, one of the following signed and executed documents between the property owner/developer and entity issuing financing as listed above must be submitted:

a) Deed Restriction

b) Regulatory Agreement

2) For a Multifamily residential complex where at least 20% of units of the total units are sold or rented to lower income households, one of the following signed and executed documents between the property owner/developer and public entity or non-profit housing provider under Internal Revenue Service Section 501(c)(3) must be submitted: a) Deed Restriction b) Affordability Covenant.

The documentation of CPUC Code 2852 eligibility must be independently enforceable and verifiable and cannot be contingent upon participation in the Multifamily Affordable Housing Solar Roofs program.

For both 1 and 2 above, it is the responsibility of the Applicant to demonstrate that the rents being charged (or initial sale costs of the units) in the multifamily residential complex are or were affordable under the definitions of "affordable housing cost," affordable rent" and "lower income households," as defined in Public Utilities Code Section 2852, all of which terms have the same meanings as in Health and Safety Code Sections 50050 through 50106. If an applicant's documentation submitted pursuant to either 1 or 2 above does not come from one of the approved public entities (California Tax Credit Allocation Committee (TCAC), California Debt Limit Allocation Committee (CDLAC), California Department of Housing and Community Development/The California Housing Finance Agency (HCD/CALHF), U.S. Department of Housing and Urban Development (HUD), A Redevelopment Agency (RDA) or RDA successor agency, A Housing Authority, or a City or County in the case of a project funded by HUD HOME Funds) — all of whom have established authority to regulate affordable housing costs and/or rents—the applicant must present evidence to the Multifamily Affordable Housing Solar Roofs Program Administrator that the relevant affordability requirements of the Public Utilities Code and Health and Safety Code have been met for all units presented by the applicant as affordable under these code sections.

In addition to the requirements above, applicants must provide evidence to either or both of the following: property is located in a disadvantaged community as defined by Cal EPA or that at least 80 percent of the households in that development have incomes at or below 60 percent of the area median income, as defined in subdivision (f) of Section 50052.5 of the Health and Safety Code.

An applicant who seeks to meet the requirement of being located in a disadvantaged community shall provide the host customer's address with census tract identifier. This information will be sufficient to allow the program administrator the ability to confirm that this address does indeed fall within the applicable definition of a disadvantaged community.

An applicant who seeks to meet the requirement of having 80 percent of tenants at or below 60 percent of AMI must provide documentation at the time of application attesting to this. PG&E proposes that income documentation that is consistent with the requirements described in the California Statewide Low Income Energy Efficiency Policy and Procedures Manual[1/] will be sufficient for this purpose.

E. Incentive Eligibility

PG&E proposes that the amount of PV generation benefiting low-income tenants from a system receiving AB 693 funds should be no less than two thirds (67%) of the total generation from said system. Thus the amount of PV generation that can be attributed to common area load to provide benefit to the building owner can be no more than 33% of the total PV generation amount.

This proposal is in line with the specific portion of AB 693 covering this topic, which states: "(2) The commission shall require that the electricity generated by qualifying renewable energy systems installed pursuant to the program be primarily used to offset electricity usage by

1/ See pages 13-17 of the California Statewide LIEE Policy and Procedures Manual, located here: http://www.liob.org/docs/Statewide%20Low%20Income%20Energy%20Efficiency%20Program%20Policy%20and%20Procedure%20Manual%208-31-10.pdf

low-income tenants. These requirements may include required covenants and restrictions in deeds."

PG&E has proposed "primarily" to mean two-thirds (67%) or greater. There should be no restriction placed upon a building owner who wishes to allow a larger percentage or all of the PV generation to offset low-income tenant bills. Understandably, some may argue for an even higher figure, such as 75%. However, because building owners require a payback on their investment of capital, time, etc. in order to have projects installed, allowing for a larger portion of benefits eligible to owners will better help to address the split incentive barrier that has prevented greater adoption in multifamily housing. The larger 33% allocation to the building owner will also help to ensure that said owners won't need as large of an incentive from the MAHSR program in order to be incentivized to participate, which will allow for incentive dollars to be spread to more customers.

F. Incentive Structure

1. Background

The MASH program has successfully leveraged upfront incentives as a means to incent multifamily housing building owners to install distributed solar. Both iterations of the MASH program used a dual-track incentive structure, deploying higher $/Watt incentives for those installations that allowed low-income tenants the ability to see bill savings. The most recent iteration of MASH, often referred to as MASH 2.0, offered the following tracks:

	$/W Incentive Amount	**Required Tenant Benefit**
MASH 1C[2/]	$1.10	None
MASH 1D[3/]	$1.80	≥50%

2/ MASH 1C: PV system Offsetting Common Area Load, Non-VNM Tenant Load, or VNM Tenant Load with <50% Benefit. See: https://www.pge.com/en_US/business/solar-and-vehicles/your-options/solar-programs/multifamily-affordable-solar-housing/multifamily-affordable-solar-housing.page?WT.mc_id=Vanity_lowincomesolar.

The incentive amounts for MASH were static and therefore did not take into account the marked decline in solar costs that have been observed over the years. This fact likely contributed to the rapid reservation of MASH funds, which became exhausted for all intents and purposes, years before the program was scheduled to end.[4/] Furthermore, the MASH incentive structure didn't take into account difference in costs between large and small projects giving a flat incentive for projects from a low of 15 kW to a high of approx. 1,000 kW of nameplate capacity.[5/] Clearly, there are economies of scale that come with larger projects and these therefore should require less of an incentive than smaller projects.

2. PG&E's Proposed Incentive Structure for MAHSR

To take advantage of declining PV costs, PG&E recommends a structure that will spread incentive dollars and ensure a larger amount of low-income multifamily residents have the opportunity to take advantage of customer-sited solar PV. Major elements of the structure can be summed up in the following table.

	Nameplate Capacity	**% of Tenant benefit**	**Incentive Structure**	**Year 1 Incentive**
MAHSR Track 1	< 100 kW	≥67% of kWh	Step-down (10% per year)	$1.44/W
MAHSR Track 2	≥ 100 kW to < 1,000kW	≥ 67% of kWh	Step-down (10% per year)	$1.17/W

3/ MASH 1D: PV System Offsetting VNM Tenant Load with ≥50% Tenant Benefit. See above website for more information.

4/ Assembly Bill 217 (Bradford, 2013) extended the MASH and SASH programs of the California Solar Initiative with $108 million in new funding. The bill extended these two programs until 2021 or until funds were exhausted. Shortly after re-opening, Program Administrators had rapidly received more than enough applications to use the entire funding amount and therefore had to close the program to new applicants.

5/ MASH Raw data set was accessed on July 13, 2016 to obtain these figures. Note: this excludes projects that have been deemed "Cancelled" or "Withdrawn." This data set can be accessed at: https://www.californiasolarstatistics.ca.gov/reports/mash_budget/.

A table illustrating the step-down mechanism for each track is below:

	2017	2018	2019	2020
Track 1	$1.44/W	$1.30/W	$1.17/W	$1.05/W
Track 2	$1.17/W	$1.05/W	$0.95/W	$0.85/W

3. Basis for Proposed Declining Block Incentive Structure for MAHSR

It has been well documented that the both MASH 1.0 and 2.0 have been very successful. In the most recent iteration of the *California Solar Initiative Annual Program Assessment* published in June 2016, it is noted that the extension of MASH (MASH 2.0) in January 2015 "reauthorized the program until 2021 or until all available incentives are encumbered." The *Assessment* also noted that although only implemented in August 2015, MASH 2.0 "incentive funding was fully subscribed in all service territories."[6/] The rapid reservation of all available funds originally intended to possibly last until 2021 leads PG&E to believe that the incentive amounts set forth could have been lower in order to help incent further growth in this market segment by better spreading ratepayer dollars around to cover more installations and therefore benefit more low-income customers.

A key part of improving upon the MASH program will be getting the incentive levels correct. In order to get incentive levels right, an understanding of where costs and prices for solar PV currently are and are expected to be in the near future would be very helpful. The sizes of projects found on multifamily housing have been larger in size, averaging 150 kW in nameplate capacity.[7/] According to MASH data, projects over 100 kW receiving MASH Track

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6/ California Solar Initiative *Annual Program Assessment,* June 2016, at page 39. This report is available at http://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/2016%20CSI%20APA%20FINAL.pdf.

7/ Median MASH installation size for 1C and 1D projects not "Cancelled" or "Withrdrawn" is 150 kW according to MASH raw data set accessed July 13, 2016 and available here: https://www.californiasolarstatistics.ca.gov/reports/mash_budget/.

1D incentives averaged a nameplate price of $3.56/Watt but ranged from a low of $1.18/Watt to a high of $5.23/Watt.[8/] Other customers have been able to purchase projects of this size for prices closer to the low end of this scale. For example, one source for this information is the National Renewable Energy Laboratory (NREL), which publishes reports on U.S. photovoltaic prices and costs on a regular basis. NREL's September 2015 report details price and cost breakdowns for Q1 2015 – two years prior to the expected start date of the MAHSR program, showing the cash purchase price for such systems."[9/] NREL's benchmarked Commercial scale 200 kW[10/] solar PV project has an all-in price of $2.15/Watt in Q1 2015. A MASH 2.0 Track 1D incentive of $1.80/Watt-CEC-AC would mean that this incentive would pay for roughly 72% of the price to the multifamily building owner or third-party owner, in the case of a lease/PPA.[11/] As the NREL benchmarked price does not take into account any incentives, the building owner or third party owner would still be eligible to further offset their costs by claiming the 30% investment tax credit (ITC), bonus depreciation and accelerated depreciation. The ITC alone in

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8/ MASH Raw data set was accessed on July 13, 2016 to obtain these figures. Note: this excludes projects that have been deemed "Cancelled" or "Withdrawn." This data set can be accessed at: https://www.californiasolarstatistics.ca.gov/reports/mash_budget/.

9/ NREL U.S. Photovoltaic Prices and Cost Breakdowns: Q1 2015 Benchmarks for Residential, Commercial, and Utility-Scale Systems. page v.

10/ Median MASH installation size for 1C and 1D projects not "Cancelled" or "Withrdrawn" is 150 kW according to MASH raw data set accessed July 13, 2016 and available here: https://www.californiasolarstatistics.ca.gov/reports/mash_budget/.

11/ Because MASH incentives have been given in terms of CEC-AC and not in DC (as is commonly reported in other sources) in order to determine what the hypothetical MASH 1D incentive would have been for a 200 kW nameplate capacity, the following assumptions and calculations were used based on averages found in the MASH Raw data set: The average ratio of CEC-AC to Nameplate Capacity for MASH 1D and 1C projects is 86%. For a 200 kW nameplate capacity system, this equates to 172 kW CEC-AC eligible for MASH 1D incentives of $1.80/Watt or $309,600 out of a total nameplate price of $430,000 using NREL's $2.15/Watt nameplate price. Thus the MASH 1D incentive in this example would pay for approximately 72% of the total nameplate price.

this scenario would at a minimum be worth a further $0.64/Watt to the system owner.[12/] By just combining these two incentives the building owner/system owner would essentially be getting the system for free (ITC value + MASH Track 1D value equals a value of $2.19/Watt vs. a price of $2.15/Watt). Given these figures, it is unsurprising that the MASH 2.0 program quickly reserved all incentives statewide after its opening in August 2015.

Future PV costs are also expected to continue to see declines. This issue was the subject of hearings in this docket last fall, where the Commission heard testimony on, among other things, whether the Energy Division Public Tool Base case or Low case price forecast scenarios was most realistic. The final NEM Successor Tariff decision did not resolve this issue,[13/] but it is clear that substantial price decreases are expected. The NEM Public Tool discussed at the hearing included a 2020 Low cost price scenario of $1.672 per watt-AC vs. a Base case of $3.039 per watt for systems larger than 10 kW.[14/] The final NEM Successor Tariff Decision accepted that at the very least, the Base case is a reasonable forecast. Since then, industry market analysis has forecasted that "U.S. Commercial pricing will fall 25% between 2015 and 2020." GTM Research reported Commercial pricing of $2.07/Watt in 2015, meaning its 25% drop by 2020 would result in prices around $1.55/Watt, or lower.[15/]

12/ This is noted as "a minimum" because the ITC can often be worth significantly more than just 30% of the system price, depending on the valuation method a third party owner uses to calculate the system's "Fair Market Value." See article on Subsidy Pass-Through under the Solar Investment Tax Credit for more detail, available here: http://www.colorado.edu/econ/papers/Wps-13/wp13-05/wp13-05.pdf.

13/ Decision 16-01-044, at p. 52, found that "Since all participants in the hearing agreed that the Public Tool's 'base case' of solar pricing was more than adequate to support reasonable growth, it is not necessary to resolve the issue of whether the 'Low' case in the Public Tool is so inaccurate as to bias the Commission's consideration of its responsibility to ensure sustainable growth of customer-sited renewable DG."

14/ See Staff Paper attached to ALJ Ruling dated June 4, 2015, Attachment 1, at p. I-19, and NEM Public Tool, Advanced DER Inputs Tab, at cells F43 and I43, available at http://cpuc.ca.gov/General.aspx?id=11285.

15/ See "Solar PV Prices Will Fall Below $1.00 per Watt by 2020" June 1, 2016, at http://www.greentechmedia.com/articles/read/solar-pv-prices-to-fall-below-1.00-per-watt-by-2020.

With the assumption that incentives for MASH 2.0 were likely too high given rapid exhaustion of funds and that solar costs will continue to see marked decreases in the near future, a better incentive structure for the MAHSR program should be developed. Due to its proven success in California and other states as well as its simplicity, PG&E believes a declining block incentive structure is the best option for allocating ratepayer funds for the purpose of incenting distributed solar PV on multifamily housing for this program.

To spread the incentive funds further and to capture the marked decline in solar PV costs, the MASH Track 1D incentive was diminished by 20% and 35% in MAHSR program year 1 (2017) for the proposed Track 1 and Track 2, respectively. From there, each year the incentive will step down by 10%.

Although PG&E believes the declining block structure and step amounts outlined above strike the right balance between incenting building owners to invest and spreading incentive funds out to benefit a larger number of customers, it is important that there be an opportunity to pause the step-down in the case of underutilization or speed it up in the case of over-subscription. This process, if necessary, could be done through an advice letter filing at the initiation of the program administrator and be open to party comment as to the necessity of such a pause or speed-up.

G. Local Hiring Requirements

Similar to the rest of its proposal, PG&E wishes to build upon the MASH program by leveraging where it was successful with workforce development and taking it further in areas that can be improved.

Hiring from the local community should be a primary goal of the MAHSR program. As program administrator, PG&E will utilize its position by acting as a hub to help make connections between solar contractors, community-based organizations, workforce training programs, interested third party organizations, and individuals from impacted communities looking to gain new skills and employment opportunities in this field. PG&E's MAHSR program

website will be one such area where those seeking information can visit in order to further their knowledge of the various workforce opportunities available. For example, the website will host a list of qualified solar training programs for those community members and organizations interested in joining the solar workforce. For solar developers, the website will be a place to learn more about the qualified local and eligible employment pipeline available to participate in MAHSR projects and beyond. As not all eligible or potentially interested parties likely have access to the internet or knowledge of this program, PG&E will also seek to work with qualified and interested third-party organizations to help further spread understanding of the opportunities available through workforce training programs and employment in the solar industry, especially those on local AB 693 funded projects.

Making these types of connections will offer several benefits. First and foremost, it should help local community members more easily find the necessary resources to get the training needed to be hired on to a solar project, immediately contribute and hopefully find long-term enriching careers. By hiring local, qualified candidates, the AB 693 program will not only provide direct economic benefits to building tenants, but will also provide economic benefits that are likely to be even greater, namely the opportunity for local community members to learn the skills and gain the experience necessary to participate in one of the fastest growing employment industries statewide. Solar contractors undertaking AB 693 projects will also benefit by being provided with a pipeline of qualified potential employees without having to do potentially costly recruiting searches on their own.

As administrator, PG&E believes helping to facilitate employment will go a long way to improving local hiring in order to meet the legislative mandate of AB 693. However, hard targets and/or specific requirements will likely still be necessary in order to ensure local hiring by solar contractors is committed to. As hiring requirements are often a complicated matter evoking divergent opinions from various stakeholders, PG&E offers to host a workshop on this matter to find the best solutions. We believe this will give multiple parties a voice to create this component that will meet the California Legislature's goals and provide a pathway to real employment.

H. Energy Efficiency Requirements

PG&E recognizes the positive impact strong energy efficiency measures can have on low-income multifamily buildings and the tenants they house. The energy efficiency requirements found in the MASH program were a good first step but can be taken further in the Multifamily Affordable Housing Solar Roofs (MAHSR) program without adversely burdening applicants or contractors.

In the similar MASH program, the energy efficiency requirement is as follows: "Conduct onsite walkthrough energy audit at ASHRAE level I or higher, or enroll in a utility, REN, CCA or federally provided whole-building multifamily energy efficiency program." Program administration data illustrates that a vast majority of host customers completed a level I audit rather than enrolling in one of the eligible energy efficiency programs to meet the MASH requirement.

PG&E is proposing that all MAHSR host-customers must undertake an ASHRAE level II audit. Upon completion of this audit, host customers will be required to submit the report as part of their incentive application to PG&E. This information will then be passed on to PG&E's Multifamily Upgrade Program (MUP) who will evaluate the report and then contact and educate the host customer on available programs and energy efficiency options, including those offered by third parties. As part of this process, and similar to MASH, low income tenants who qualify for the Energy Savings Assistance (ESA) program will be contacted to have their own evaluations undertaken and efficiency measures implemented which would result in further energy savings. This proposal is an improvement on the existing MASH requirement which could be met by simply performing a walk-through energy audit with no guarantee that any energy efficiency measures are presented or considered. PG&E's proposal assures that impactful energy efficiency measures and the applicable programs/incentives that can help deliver these benefits are presented to the host customer and low-income tenants.

Multifamily buildings vary dramatically in size, tenant occupancies, and efficiency needs. PG&E is uniquely suited to facilitate the integration of solar, ESA, and the Energy Efficiency programs where eligible Multifamily owners and managers can participate.

III. RESPONSES TO QUESTIONS IN THE RULING

Question 1. Section 2870 requires that a property meet the statutory definition of "qualified multifamily affordable housing property" in order to be eligible to receive an incentive from the Program. How should the Program implement this requirement?

This topic is addressed above in section II.C and below in response to Question 2.

Question 2. Should the Program use the CalEnviroScreen tool developed by the California Environmental Protection Agency to determine the boundaries of "a disadvantaged community, as defined by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code"? Why or why not? If you recommend using another method, please provide sources for the method, a detailed justification for its use, and examples of its potential application to the Program.

AB 693 is clear about what types of communities qualify as disadvantaged and therefore eligible to participate in this program so long as it meets the qualified multifamily housing property requirement. AB 693 states: (3) "Qualified multifamily affordable housing property" means a multifamily residential building of at least five rental housing units that is operated to provide deed-restricted low-income residential housing, as defined in clause (i) of subparagraph (A) of paragraph (3) of subdivision (a) of Section 2852, and that meets one or more of the following requirements:

> (A) The property is located in a disadvantaged community, as identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code.
>
> (B) At least 80 percent of the households have incomes at or below 60 percent of the area median income, as defined in subdivision (f) of Section 50052.5 of the Health and Safety Code.

In October 2014, the California EPA formally adopted a definition of "disadvantaged communities" under Health and Safety Code section 37911 in the document "Designation of

Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon)."[16/] In this document, the California EPA formally adopted the method and percentage determinations necessary for declaring a community disadvantaged. The document explains "Method 1 is the most suitable choice for identifying disadvantaged communities pursuant to SB 535…. This is the method that OEHHA used to rank census tracts in the CalEnviroScreen 2.0 report."[17/] This document also details the percentage threshold to be adopted, stating "after taking into consideration legislative direction, comparative markers of being disadvantaged and basic principles of fairness, CalEPA will use a 25 percent threshold to identify disadvantaged communities."[18/]

It must be noted that per the Office of Environmental Health Hazard Assessment (OEHHA), the CalEnviroScreen tool is to be updated at some point in 2016.[19/] Once this is complete, the California EPA may adopt the new tool to define disadvantaged community per Health and Safety Code section 37911. If this occurs, the eligible areas for the AB 693 MAHSR program would change with the tool update. Until this has been done, AB 693 clearly points to using the currently adopted Cal EPA definition for the definition of disadvantaged community for purposes of this section.

The issues of how to define a "disadvantaged community" is a recurring one that is often brought up in a number of different CPUC proceedings. Over the past two years PG&E has participated in several workshops at CPUC on this very question and encouraged the CPUC to use a single definition to achieve consistency across programs. Unfortunately, the specific language in AB 693 makes it very difficult to achieve this goal here. Earlier in this proceeding, in discussion of the programs for disadvantaged communities under AB 327, PG&E and many

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16/ http://www.calepa.ca.gov/EnvJustice/GHGInvest/Documents/SB535DesCom.pdf.

17/ Ibid, p. 12.

18/ Ibid, p. 14.

19/ See "CalEnviroScreen Update" http://oehha.ca.gov/calenviroscreen/general-info/calenviroscreen-update.

other parties argued that the CES 2.0 tool screening the top 25% of impacted communities statewide misses areas that should be included based on historical environmental and income inequities while including areas that have high scores based on certain environmental screenings but score much lower on the poverty criteria screen (meaning many members of these communities are not low-income). PG&E believes many of the latter areas should not be included in targeted investments at the expense of areas with slightly lower environmental impact scores but much higher poverty scores (i.e., high socioeconomic disadvantage). However, the specific language in AB 693 leaves the definition of "disadvantaged communities" to the Cal EPA to define for purposes of this program. Fortunately, the statute also includes low income tenants outside of disadvantaged communities among those eligible for this program.

Question 3. What specific types of documentation should an applicant be required to submit in order to demonstrate that it meets all relevant elements of the statutory definition:

a. The Section 2852(a)(3)(A)(i) definition of "low-income residential housing;"
b. At least one of:
i. Location in a disadvantaged community, as statutorily defined; or
ii. At least 80 percent of households have incomes at or below 60 percent of Area Median Income (AMI).

Provide a justification for the relevance and sufficiency of each type of documentation identified. If more than one type of documentation, or alternative forms of documentation, are recommended, please specify whether any type is preferred, and why.

Sections II.C and D above describing PG&E's proposal address the eligible housing and necessary documentation.

Question 4. If some tenants of an otherwise qualified property are customers of community choice aggregators (CCAs), should this affect the eligibility of the property for the program? Why or why not? Would the number or proportion of tenants who are customers of CCAs be relevant to your recommendation? How?

PG&E recommends that customers of community choice aggregators (CCAs) be eligible to participate in the program, so long as they otherwise qualify.

Question 5. Should the available incentive funding be allocated as a certain percentage to properties that qualify by virtue of location in a disadvantaged community and to those that qualify by virtue of low-income tenant households? Why or why not?

PG&E does not propose to allocate a certain percentage of available incentives based on whether or not the property is in a disadvantaged community. Throughout the portion of the NEM proceeding focusing on disadvantaged communities, PG&E has advocated for policies that would provide incentives for customers who need them based on barriers to adoption. The vast majority of barriers to solar adoption are in one way or another financial barriers and therefore the focus of incentive funding should be on low-income customers. AB 693 does this by making a determination that only low-income multifamily housing should qualify for incentives. The slightly less onerous specification for those units that are located within disadvantaged communities shall likely be enough to ensure low-income tenants residing in these areas have the opportunity to see the adoption of solar in proportions equal or greater than those low-income buildings located outside of disadvantaged communities.

Question 5.a. If such a division of incentive funding should be made, should a predetermined fixed division be made (e.g., 50 percent to each type)? What percentage should such a fixed division be? Please provide a detailed justification for the recommended proportions.

N/A – see response to Question 5 above.

Question 5.b. Should such a division of incentive funding, if one is made, be determined each program year? For some other time period? Why or why not?

N/A – see response above.

Question 6. Should the 300 megawatt (MW) capacity goal be allocated as a certain percentage to properties that qualify by virtue of location in a disadvantaged community and to those that qualify by virtue of low-income tenant households? Why or why not?

N/A – see response above.

Question 6.a. If such a division of MW should be made, should a predetermined fixed division be made (e.g., 50 percent to each type)? What percentage should such a fixed division be? Please provide a detailed justification for the recommended proportions.

N/A – see response above.

Question 6.b. Should such a division of MW, if one is made, be determined each program year? For some other time period? Why or why not?

N/A – see response above.

Question 7. What type of incentive structure should the Commission adopt for the Program? Should the Commission implement an upfront, estimated performance-based incentive, similar to the MASH program, or should a different incentive structure be adopted (e.g., an auction mechanism)? Please describe why your proposed incentive structure would be best suited to achieving the Program goals.

PG&E's proposed declining incentive structure, provided in more detail above, would leverage the success of the upfront, estimated performance based incentive structure found in the very similar MASH program while improving upon this program by accounting for the very likely sizable continued decreases in solar PV costs. By maintaining an EPBB incentive structure, the MAHSR program will pick up where the MASH program has essentially left off. Benefits to this include straightforward and therefore cost-effective program administration as well as a large contingent of solar project developers with familiarity and comfort in utilizing and marketing this incentive structure. Because PG&E's proposal leverages these aspects, it should mean the MAHSR program is up and running quickly after receiving approval, which will allow more tenants to benefit from the program in a timely manner.

If a radically different structure is set forth, the benefits of continuity with a successful program will likely be lost. Without continuity from the successful MASH program, it will very likely take a longer time (relative to program continuity with reasonable updates) to install PV on low-income multifamily residences and begin to allow these tenants to realize bill savings and/or job opportunities for community members.

Question 7.a. Please describe in detail how your proposal complies with the requirement of Section 2870(f)(4).

Section 2870(f)(4) states:

> (4) The commission shall ensure that incentive levels for photovoltaic installations receiving incentives through the program are aligned with the installation costs for solar energy systems in affordable housing markets and take account of federal investment tax credits and contributions from other sources to the extent feasible.

As noted above, a review of MASH data demonstrates PV costs for MASH 1C and 1D projects over 100 kW averaged a nameplate price of $3.56/Watt but ranged from a low of $1.18/Watt to a high of $5.23/Watt and the NREL benchmarked commercial scale price for a 200 kW system was $2.15/Watt in Q1 2015. PG&E's proposed declining block incentive structure used these benchmarks to inform what the step-down incentive levels should be. To demonstrate how the proposed incentive is in line with Section 2870(f)(4), please consider the following example:

In year one of the program as PG&E has proposed it, a 100 kW project coming in between the average MASH 1C and 1D price of $3.56/Watt and the NREL benchmarked price of $2.15Watt would be $2.86/Watt. At this amount, a project would have a total price to the building owner before any incentives of $286,000.00. The proposed MAHSR year one incentive of $1.17/Watt CEC-AC would provide $100,620.00.[20/] The 30% federal investment tax credit would provide a further $85,800.00 in incentives. If these were the only two incentives that the building owner could take advantage of the remaining balance needed to be paid by the building owner would be $99,580.00. This amount represents approximately 34.8% of the total up-front, pre-incentive price. This percentage is roughly in line with the amount of PV generation PG&E is proposing the building owner can use to offset common area load (33%). Given the common area electricity bill savings, the building owner will very likely be inclined to make this investment once combined with the available ITC and MAHSR incentive. It should be further noted that the average price used for this illustration will very likely be lower once the MAHSR program begins and therefore the building owner's out of pocket percentage could very well be smaller than listed above. Further, if the building owner cannot take advantage of the ITC, third

20/ Because CSI and MASH incentives have been given in terms of CEC-AC and not in DC (as is commonly reported in other sources) in order to determine what the AB 693 incentive would be for a 100 kW nameplate capacity project the following assumptions and calculations were used based on averages found in the MASH Raw data set: The average ratio of CEC-AC to Nameplate Capacity for MASH 1D and 1C projects is 86%. For a 100 kW nameplate capacity system, this equates to 86 kW CEC-AC eligible for MAHSR Track 2 incentives of $1.17/Watt.

party leasing arrangements allow for the pass-through of this incentive as well as bonus and accelerated depreciation in the form of lower pre-paid lease prices or power purchase agreement (PPA) rates.

As noted in the proposal above, the decline rate of 10% aims to help ensure that the incentive amount provided by the MAHSR program does not contribute too large a portion of the total price to the building owner, who can take advantage of other incentives and should be further incentivized to invest in any remaining balance to secure utility bill savings for common area loads.

Question 7.b. If you believe an upfront incentive structure should be adopted, please describe how the incentive level or levels should be determined. Please include quantitative data to support your recommendation.

Question addressed above and in Section II. F. 2 of PG&E's Proposal.

Question 7.c. If you believe a different incentive structure should be adopted, please describe in detail how such a structure would be implemented. Please include quantitative data to support your recommendation.

N/A

Question 8. Would a solar energy system paired with a storage device meet the definition in Section 2870(a)(4) of "solar energy system"? Why or why not?

Storage paired with a solar system would not meet the definition of a "solar energy system" as contemplated by the Legislature. The language is clear that the program is designed for solar systems, and only for solar systems. The language in AB 693 defines the "solar energy system" as a "solar energy photovoltaic device that meets or exceeds the eligibility criteria established pursuant to Section 25782 of the Public Resources Code." PRC Section 25782 was enacted as part of the California Solar Initiative and established a responsibility for the California Energy Commission to establish criteria for solar systems receiving rebates under that program. At no time was Section 25872 considered to include storage, nor has the CEC established any eligibility criteria for storage pursuant to that statute.

If the Legislature wanted to provide incentives for storage as well, they could have said so. Since they did not, the only conclusion possible is that only a solar energy system can receive incentives under this program. Of course, a customer wishing to receive an incentive under this program can certainly include a storage system in their overall project but the storage would not qualify for any incentive.

Question 9. If you believe that a solar energy system paired with a storage device meets the Section 2870 definition, should the Commission adopt incentive levels or structures for these projects that differ from the incentive structure that you have recommended in response to Question 7 for systems without storage? If so, how should the incentives differ? Please be specific and provide quantitative examples if relevant.

See answer to Question 8. However, as noted, a customer is free to include storage in its project, it simply cannot receive an incentive for a storage system through the MAHSR program. PG&E notes that storage is eligible for incentives under through the Self Generation Incentive Program. In addition to the fact that the Legislature obviously never intended storage to receive incentives under this program, such a step would be duplicative of existing incentive programs.

Question 10. Which, if any, features of the California Solar Initiative (CSI) and Multifamily Affordable Solar Homes (MASH) programs should be continued under the Program? For each program feature that you recommend be adopted for the Program, please provide a justification for its applicability and effectiveness for the Program.

PG&E believes using the successes of the current MASH program while correcting some of the current confusing rules will help drive continued interest in low income solar programs while not bogging stakeholders down with the need to learn and adapt to potentially new and confusing rules. PG&E proposes that the framework of the MASH program be carried over into the new MAHSR program. This also offers the ability to save administrative dollars during the crucial set-up phase of the new program as existing documentation and systems can be utilized and modified, ensuring more total program dollars can go to incentives rather than the running of the program. This benefits all stakeholders involved from the Program Administrators to the low-income tenants this new program will benefit.

PG&E would like to see greater integration with Energy Efficiency in the new MAHSR program. In the similar MASH program, the energy efficiency requirement is as follows: "Conduct onsite walkthrough energy audit at ASHRAE level I or higher, or enroll in a utility, REN, CCA or federally provided whole-building multifamily energy efficiency program." Program administration data illustrates that a vast majority of host customers completed a level I audit rather than enrolling in one of the eligible energy efficiency programs to meet the MASH requirement. When that first option is chosen, it provides no assurances that the building owner will continue seeking energy efficiency and enact any of the recommendations from the audit performed. Please see Section II.H of our proposal for more information on our recommendations for Energy Efficiency requirements in the MAHSR program.

To prevent potential exploitation of the MAHSR Program, PG&E proposes that a system size of MAHSR projects should not exceed the actual energy consumed during the previous 12 months at the project site.

PG&E believes that a limit to the amount of extensions is needed in the MAHSR program. This prevents the potential for poaching and holding valuable incentives for installations that may not be feasible at the time of filing the application. Limiting the amount of extensions that can be requested will ensure that applications are only initially submitted after a system has been found to be viable to be installed and will prevent the holding of incentive dollars in perpetuity instead of advancing the admirable goals of the program to bring renewable energy to low-income tenants.

PG&E believes that the other aspects of the currently successful MASH program should be carried over into the MAHSR program including (but not limited to), the three-tiered applications process, requirements (licensed contractors, warranty, performance, inspections, etc.), limitation of incentive being no more than 100% system cost, etc.

Question 11. How should the requirements regarding third-party owned systems set out in Section 2870(f)(3) be implemented? Please specifically address at least the following statutory requirements:

- Enforcing contractual restrictions that ensure no additional costs are passed on to low-income tenants.
- Requirement that third-party system owners provide ongoing operations and maintenance of the system, monitor energy production and ensure that projected system production is achieved.

As seen in the successful MASH program, third-party financing is an oft-used tool for MASH property owners. Historically, MASH property owners have financed their projects through solar rebates, grants, and third-party financing with the installer or an outside financier. Third-party owned systems participating in the MAHSR program should be able to ensure that no additional costs are passed on to low-income tenants. This includes adjustments to current utility allowances that reduce said allowances to compensate for reduced load due to the incentivized system as well as any potential charges to the low-income tenants for the energy generated. An affidavit signed by the building owner ensuring that tenants will not be charged for the PV generation nor have their utility allowance adjusted negatively, as there is in the current MASH program, could suffice or a more stringent legally binding document could be utilized.

A similar affidavit could be utilized in which the third-party system owner would be required to provide ongoing operations and maintenance of the system, monitor energy production and ensure that the projected system production is achieved. This would be monitored by required Performance Monitoring and Reporting Service as in MASH.

Question 12. What types of local hiring requirements should be adopted?

Question 12.a. How should the local hiring requirements be designed to ensure that they "provide economic development benefits to disadvantaged communities"? Please address, among other things, whether the requirements should be focused on hiring residents of disadvantaged communities and/or on businesses located in disadvantaged communities.

As explained in Section II.G above, PG&E believes the MAHSR program can take advantage of the existing pool of qualified local candidates found statewide by requiring solar contractors that participate in AB 693 projects to employ eligible candidates from local communities. As the program administrator, PG&E will act as the connection point between

solar installers, job training programs, and other interested third party organizations and community-based organizations to ensure those local candidates seeking employment opportunities in the solar industry have the information needed to participate.

Question 12.b. Should these requirements include job training requirements similar to MASH?

No, PG&E believes local hiring requirements laid out above in its proposal goes a step further and replaces the need for job training requirements.

Question 13. How should the Commission implement the requirement that the electricity generated by incentivized systems "be primarily used to offset electricity usage by low-income tenants"? Please address at least the following:

a. Should all, or a percentage of, electricity generated by the system offset low-income tenants' usage? Please provide a justification, including quantitative examples if relevant, for your recommendation.

b. If you believe only a percentage of electricity generated by the system should be required to offset usage by low-income tenants, please propose and justify a method for allocating the percentage, including quantitative examples.

c. How should the Program Administrator(s) verify that electricity generated by incentivized systems is offsetting electricity usage by low income tenants?
In your response, please discuss at least:
i. The role of utility allowances, and
ii. Required covenants or restrictions in deeds.

d. Which utility tariffs and credits should qualify as meeting the requirements of Section 2870(g)(1)? Please identify any other issues of coordination with current utility tariffs and credits that should be considered in the implementation of the Program.

As explained in section II.E above, PG&E proposes that the amount of PV generation benefiting tenants from a system receiving AB 693 funds should be no less than two thirds (67%) of the total generation from said system. Thus the amount of PV generation that can be attributed to common area load to provide benefit to the building owner can be no more than 33% of the total PV generation amount.

This proposal is in line with the specific portion of AB 693 covering this topic, which states: "(2) The commission shall require that the electricity generated by qualifying renewable

energy systems installed pursuant to the program be primarily used to offset electricity usage by low-income tenants. These requirements may include required covenants and restrictions in deeds." PG&E proposes that "primarily" mean two-thirds (67%) or greater. There should be no restriction placed upon a building owner who wishes to allow a larger percentage or all of the PV generation to offset tenant bills.

The use of "primarily" in AB 693 does not immediately lend itself to a specific percentage. The word "primarily" is commonly understood to mean more than half but less than complete. Therefore some percentage between 51 and 99 could be chosen. Splitting the two yields 75% and is likely an idea that others will suggest. PG&E proposes here a lower figure because building owners require a payback on their investment of capital, time, etc. in order to have projects installed, allowing for a larger portion of benefits eligible to owners will better help to address the split incentive barrier that has prevented greater adoption in multifamily housing. The larger allocation to the building owner will also help to ensure that said owners won't need as large of an incentive from the MAHSR program in order to be incentivized to participate, which will allow for incentive dollars to be spread to more customers.

PG&E proposes that to guarantee that tenants see the benefit of the PV systems, VNEM allocations that are locked for 20 years be used. This ensures that tenants are receiving the generation of these PV systems for the life of said systems.

As stated in response to Question 11, PG&E proposes an affidavit similar to the MASH program regarding utility allowances be once again utilized.

Please see Section II.D of our Proposal for more on the required documentation to prove eligibility for the MAHSR program.

Question 14. How should the Commission address the requirements of Section 2870(g)(2)?

Section 2870(g)(2) states: "(2) The commission shall ensure that electrical corporation tariff structures affecting the low-income tenants participating in the program continue to provide a direct economic benefit from the qualifying solar energy system."

Low-income tenants will be able to receive a direct economic benefit from the solar energy system through bill credits on their monthly electric bill. These bill credits will be allocated to tenants by the building owner and must constitute at least 67% of the total PV generation but could be more if desired. These bill credits must not impact utility allowances (to be verified through an affidavit) and therefore will allow for low-income tenants to receive bill savings, with all else being equal (such as energy usage, for example).

Question 14.a. Which existing tariffs could this requirement implicate? Please specifically describe the relationship of Section 2870(g)(2) to each tariff identified.

The utility tariff that this program will likely impact would be NEM2VMSH. There are a series of tariffs that are likely to be benefitting accounts under the NEM2VMSH arrangement. Some of these tariffs are tenant-related and would likely include EL-1, EL-6, EL-7, and EL-8, among others. Some are common area accounts, such as A-1, A-6, and A-10, among others. In addition there are accounts that could qualify for the program which are nonresidential low income tariffs, such as E-CARE.

The relationship for benefitting accounts would be that they would be receiving a credit, so implementation has complex IT repercussions to ensure billing is done appropriately (just like any other tariff involving an arrangement of different accounts).

Question 14.b. How should the Commission account for the impact of potential changes to utility tariffs being considered in other proceedings or contexts (e.g., residential rate redesign) on the obligation set out in Section 28709(g)(2)?

Section 2870(g)(2) prescribes direct economic benefit from the qualifying solar energy systems for low income customers. Residential rate redesign in a multi-year, multi-step process that is needed to more closely align cost of service with electric rate structures. Even with changing rates that begin to reflect the true value of distributed solar PV to the grid via reduced credits from updated TOU rates, for example, low-income customers will still see a direct economic benefit if all else relating to their energy usage is equal when compared to a situation where they would not have bill credits from a solar PV system. The savings may not be a consistently high uniform amount throughout the life of the PV system, but that doesn't mean

there won't be savings. There will be no situation where the customer will be better off without having the economic benefit of credits from the qualifying solar PV system, regardless of much needed updates to come to rates. Therefore, the Commission does not need to account for these changes as the directive in Section 2870(g)(2) will have been met.

Question 15. Should the Program include a limit on the amount of incentive payments that can be paid to projects developed by any one third-party owner, supplier or installer of qualified solar energy systems? Why or why not? If there should be such a limit, how should it be determined?

PG&E has no comments at this time but reserves the right to file reply comments.

Question 16. Should the Program include a limit on the number of MW for which projects developed by any one third-party owner, supplier or installer of qualified solar energy systems may be paid with Program incentives? Why or why not? If there should be such a limit, how should it be determined?

PG&E has no comments at this time but reserves the right to file reply comments.

Question 17. What program administration structure should be adopted? Please address at least the following with specificity:

a. Both the benefits and the drawbacks of utility administration;
b. Both the benefits and the drawbacks of third-party administration;
c. Both the benefits and the drawbacks to selecting one statewide administrator;
d. Both the benefits and the drawbacks of selecting different administrators in each utility territory;
e. If you believe a third-party administrator should be selected through a competitive bidding process, what criteria should be used to evaluate proposals?
f. What, if any, program rules or funding/budget specifications would be affected by your recommendation for administrative structure?

PG&E is eminently qualified and should be the Program Administrator in its territory given its successful administration of the very similar MASH program for over 7 years.

In the CPUC decision implementing AB 217, authorizing additional funding for MASH, which was D.15-01-027, multiple parties advocated for Program Administration to be continued to be spread between the three current PAs. The parties advocating for that previously were The MASH Coalition, PG&E, Renewable Energy Partners, SCE, Everyday Energy, ORA, and Shorebreak Energy. They stated that the three existing Program Administrators have been efficient. PG&E and SCE also pointed out that they have effectively managed their

administrative budgets and that they have expertise in this market sector in their service territories. At that time, the Commission was not persuaded that centralization of the Program Administrator role at that phase of the program would result in any additional administrative efficiencies. It stated that "The existing MASH Program Administrators have efficiently administered the program at a fraction of their allocated administrative budgets while fully subscribing available incentives. The existing Program Administrators also have experience working with affordable housing developers, property owners, and customers in their service territories, which will be valuable for the efficient administration of the program going forward."[21/] It also brought up that continuing to the current three Program Administrators would "allow the program to continue to benefit from the experience the administrators have gained over the previous five years of the program." D.15-01-027, at p. 11.

PG&E opposes the appointment of a statewide administrator because it may increase administrative costs, will decrease Commission oversight, will disrupt the customer experience in an area where customers are most vulnerable, and will create a barrier for seamless implementation.

The CPUC has some experience with third-party administration of programs, both distributed generation programs and energy efficiency programs. In addition, the CEC has administered programs funded by utility ratepayers. Consequently, the CPUC should be aware of the difficulties that can result from third-party administration.

First, having a non-IOU statewide administrator has additional costs and burden for both the statewide administrator and the IOUs as additional integration is needed to ensure that ratepayer funds are properly being transferred and utilized. If nothing else, the additional cost of administering the third party contract falls either to the utility funding the program or to the CPUC itself. PG&E recognizes that the CPUC already has staffing constraints, as does PG&E.

[21/] D.15-01-027, at p. 11.

The administrative budget will be stretched and program implementation delayed if either the CPUC or utility has to design the RFO, conduct the competitive bidding process, negotiate contract terms with the winner, and provide oversight of the contract.

Second, the contract with the third party administrator would be governed by contract law, not the regulatory authority of the CPUC, making the third party less responsive to CPUC direction. Should the program need modification, there is no contractual obligation for the third party to cooperate. The utilities, on the other hand, *are* obligated to comply with CPUC direction. Finally, the program information will not be as rich with third party administration. The third party will only collect and provide data within the context of contractual compliance, while the utility has access to, and can include, other information. The utility will also remain under CPUC jurisdiction long after the program has ended. This means (among other things) that the initial measurement and evaluation of the program will be easier. It also means that program evaluation can continue for the life of the installation, long after the program has ended and the third party administrator has moved on to other work.

Third, the most successful program will be seamlessly integrated with energy efficiency, low income outreach, the interconnection process, and rates and tariff information and advice. None of this could be done by the third party administrator and all of it can easily be integrated within the utility. Customers could be confused because the third party administrator would be the customer's contact for some things, but the utility would necessarily be the point of contact for others. More critically, the third party administrator cannot access tenant information, nor can the building owner, without the tenant's agreement. The utility is in the best position to manage the relationship with the tenant, because we already have such a relationship.

Question 18. In D.12-12-033, the Commission established a framework for Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), Liberty Utilities (CalPeco Electric) LLC (Liberty), and PacifiCorp to distribute proceeds of greenhouse gas (GHG) allowances allocated to electric investor-owned utilities (IOUs) in furtherance of the goals of AB 32 (Nuñez/Pavley), Stats. 2006, ch.488 (the Global Warming Solutions Act of 2006), to their customers. The GHG allowance proceeds identified in Section 748.5 and called out in

Section 2870 are those of "an electrical corporation," a category that includes all five utilities listed above.

a. Should PG&E, SCE, SDG&E, Liberty, and PacifiCorp all be required to contribute GHG allowance proceeds to fund the Program? Why or why not?

Language in the statute makes clear that IOUs must participate in the program.

b. Should incentives from the Program be available to eligible projects in the service territories of all five utilities? Why or why not?

PG&E prefers that funds earmarked for our ratepayers (which GHG allowance funds clearly are) be actually disbursed to the benefit of our ratepayers and therefore does not believe that PG&E ratepayer funds should be used for incentives outside of PG&E territory.

c. If you believe that any of the five IOUs should be exempt from contributing to and/or having projects in their service territories participate in the Program, please provide an explanation for the recommended exemption(s).

PG&E takes no position at this time, but reserves the right to comment on other parties' positions.

Question 19. Section 2870(c) directs the Commission to annually authorize "the allocation of one hundred million dollars ($100,000,000) or 10 percent of available funds, whichever is less, from the revenues described in subdivision (c) of Section 748.5," to fund the Program. The statute also allows up to 10 percent of total funds allocated to the Program to be used for administration.

a. If the annual allocation of funds is $100,000,000 (because this amount is less than 10 percent of available funds), how should each IOU's contribution be determined (e.g., based on retail sales, based on another methodology)? Please provide a detailed explanation for the method chosen. Please provide quantitative examples, including a complete calculation with your recommended method.

If the Commission continues to utilize the method outlined in the Administrative Law Judge's Ruling issued on March 18, 2016,[22/] the funds reserved in the Energy Resource Recovery Account (ERRA) filings of the three utilities would still be used to allocate program

22/ *Administrative Law Judge's Ruling (1) Adding Respondents And (2) Providing Interim Direction to California Electric Utilities on Accounting for Funds for Implementation of Assembly Bill 693* [March 18, 2016 Ruling].

contributions if the funds reserved are more than $100,000,000 for any year. For example, assume PG&E reserved $50 million, SCE reserved $45 million and SDG&E reserved $15 million. In that case, the total reserved would be $110 million, meaning for that year the program funding would be capped at $100 million. Each utility's contribution would again be calculated based on its reservation divided by the total reserved funds. For PG&E this would be $45.45 million, for SCE $40.91 million; and for SDG&E $13.64 million.

The calculation of "10 percent of available funds" is discussed in response to Question 26. As explained there, and in other places below, it currently appears the funds available for this program between now and 2020 will be substantially below the $100 million figure.

b. If the annual allocation of funds is 10 percent of available funds (because this amount is less than $100,000,000), how should each IOU's contribution be determined (e.g., based on retail sales, based on another methodology)? Please provide a detailed explanation for the method chosen, including the calculation of "10 percent of available funds." Please provide quantitative examples, including a complete calculation with your recommended method.

In the Administrative Law Judge's Ruling issued on March 18, 2016,[23/] the CPUC directed PG&E, SCE and SDG&E to reserve funds for the MAHSR Program through each utility's respective Energy Resource Recovery Account (ERRA) filing. PG&E suggests this would be the appropriate vehicle for reserving funds throughout the program. Whether the allocated funds are above or below the $100,000,000 program cap, the allocation would be the same. Each utility's contribution to the program would be that utility's ERRA reservation divided by the sum of all three ERRA reservation amounts.

For example, assume in a given year PG&E reserves $15 million, SCE reserves $12 million and SDG&E reserves $6 million. The total program funding for that year would be $33 million, with each utility contributing the full reserved funding. The contribution percentage

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23/ *Administrative Law Judge's Ruling (1) Adding Respondents And (2) Providing Interim Direction to California Electric Utilities on Accounting for Funds for Implementation of Assembly Bill 693* [March 18, 2016 Ruling].

would be 45.5% for PG&E, 36.4% for SCE and 18.2% for SDG&E, calculated by dividing each utility's funds by the total for all three utilities.

c. While AB 693 discusses the Program budget in terms of fiscal years (*see*, e.g., Section 2870(c)), IOUs record and distribute GHG allowance proceeds over the course of a calendar year. Do funding calculations need to account for this timing difference? If so, how? Please provide quantitative examples, if relevant.

No, PG&E does not believe that the timing of the funding needs to match to that of the distribution of the Greenhouse Gas (GHG) allowance proceeds. Section 2870(c)[24/] allocates funds starting July 1, 2016 and ending June 30, 2020, with the option to continue allocation of the funds through June 30, 2026. As was done in ALJ Simon's March 18, 2016 Ruling,[25/] the amount of funding can be prorated so that for the years 2016 and 2020, only half the funding is allocated to the AB 693 Program budget (e.g. 5% instead of 10%). PG&E has set aside an estimation of the funds to be allocated for the AB 693 MAHSR Program. PG&E has set aside approximately $7M, for half of 2016 and the entire 2017, of its forecast GHG proceeds, pending upon the Commission's final decision on the actual funding required.

Once the Commission has decided on the actual funds to be set aside, PG&E would record the authorized budget from the Greenhouse Gas Revenue Balancing Account (GHGRBA) to a new AB693 MAHSR Balancing Account. The purpose of this new account is to track and record the difference between the authorized budget with the actual spent, separately from the GHGRBA (see response to Question 19.d and Question 20, below). Additionally, PG&E would

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24/ Section 2780(c) states: (c) The commission shall annually authorize the allocation of one hundred million dollars ($100,000,000) or 10 percent of available funds, whichever is less, from the revenues described in subdivision (c) of Section 748.5 for the Multifamily Affordable Housing Solar Roofs Program, beginning with the fiscal year commencing July 1, 2016, and ending with the fiscal year ending June 30, 2020. The commission shall continue authorizing the allocation of these funds through June 30, 2026, if the commission determines that revenues are available after 2020 and that there is adequate interest and participation in the program.

25/ March 18, 2016 Ruling at p. 4.

propose that the Commission allows it to roll forward any unspent MAHSR Program budget from one year to the other, similar to OP 16 of D.12-12-033.[26/]

As an experienced program administrator, PG&E is well-suited to managing program budgets, balancing accounts and ensuring appropriate allocation and spend, having already done so for programs such as the Self-Generation Incentive Program (SGIP), MASH and the California Solar Initiative (CSI).

d. Since the amount of annual GHG allowance proceeds in future years is unknown, the amount of funding available for the Program each year cannot be specified in advance. How should budgets for the Program be determined in the context of this uncertainty? Please provide specific justifications for your proposed method.

In order to minimize the uncertainty and the risk of underfunding the program, PG&E proposes that the MAHSR program be re-opened on a semi-annual basis and the funding available be based on actual auction allowances. The annual auction schedule is published in advance on the Air Resources Board website.[27/] PG&E proposes that after a minimum of two auctions have taken place[28/] and the aggregated, actual auction allowance proceeds are known, that it be permitted to file a Tier 2 Advice Letter, setting aside the 10% of available funds, as described in Question 26, for use in the MAHSR program. These relevant amounts would also be included as part of each IOUs ERRA filing. Upon Commission approval of the budget, PG&E and other Program Administrators would then re-open the MAHSR program until the available incentives funds for that round have been exhausted. For example, the MAHSR program could open in January 2017, after the auction proceeds for 2016 were known and

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26/ *Decision Adopting Cap-And-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities*, effective on December 20, 2012, in R.11-03-012.

27/ California Environmental Protection Agency – Air Resources Board – Auction and Reserve Sale Information: http://www.arb.ca.gov/cc/capandtrade/auction/auction.htm.

28/ PG&E recommends at least two auctions take place, in order to build up a fair sized budget for program re-opening and to allow it to file a public Advice Letter with the aggregated information. Any auction-specific information or breakdown would need to adhere to the Confidentiality Protocol provided by Attachment A of D. 14-10-033.

finalized. In 2017, the MAHSR program could re-open in June 2017 after the first two auctions were concluded (e.g. February and April/May), and then again in January 2018, after the last two auctions of 2017 were concluded.

Additionally, PG&E proposes the creation of a new one-way AB693 MAHSR balancing account, to track and record the differences between the authorized budget and actual spending.

PG&E proposes to roll forward any unspent amounts in the AB 693 MAHSR balancing account into future Program years. Should there be excess funds in the MAHSR balancing account at the end of the program, PG&E proposes returning the funds to customers through crediting the existing Greenhouse Gas Revenue Balancing Account (GHGRBA).

e. What types of activities should administration funds be used for? Please specifically address at least: program administration; measurement and evaluation; and marketing and outreach.

Given the similarities between the MAHSR and the MASH programs, PG&E proposes a similar list of administrative activities.

i. Program Administration: Administrative funds should be provided for program administrators to accept and review applications, ad hoc troubleshooting with various stakeholders, update and maintain the Program databases, application portals, and handbooks, and process incentive claims.

ii. Measurement and Evaluation: Program administrators should submit semi-annual progress reports, similar to those required by the SASH and MASH programs in D.15-01-027. Aligning the MAHSR report with these established reports will allow comparisons and insight into the success of the various programs.

iii. Marketing and Outreach: Program administrators should file an annual marketing and outreach plan in conjunction with the annual MASH marketing and outreach plan, due on December 1 of each year and required by D.15-01-027. By filing both the MASH and MAHSR marketing and outreach plans in one advice letter,

program administrators will be able to coordinate, build upon and leverage efforts being done in the other program.

f. What proportion of the total Program budget (not exceeding 10 percent) should be allocated to administration? Please justify the number chosen with reference to the activities identified in response to Question 22e.

PG&E recommends that 7% of the total Program budget be allocated to administration, marketing and evaluation. This amount is based on the amount allocated in D.15-01-027, which is based on information of past MASH expenses. Similar to MASH, program administrators should be authorized to request Commission approval to transfer funding from their administrative budgets to their incentive budgets via a Tier 2 advice letter if required.

Question 20. What is the appropriate regulatory accounting mechanism for the IOUs to use to set aside GHG allowance proceeds for the Program? Please explain in detail the basis for your recommendation.

Currently, at PG&E, the GHG allowance proceeds are tracked in the Greenhouse Gas Revenue Balance Account (GHGRBA).[29/] In PG&E's 2017 ERRA filing,[30/] PG&E estimated to set aside approximately $7 million of the GHG proceeds for the 2016-2017 MAHSR program funding. However, PG&E proposes that it be authorized to file a Tier 1 Advice Letter to create an AB 693 MAHSR balancing account to track the difference between the authorized MAHSR budget against actual spent. The MAHSR budget is the authorized GHG proceeds set aside and moved from GHGRBA.

Question 21. The California Air Resources Board's Cap-and-Trade Regulation prevents utilities from publicly disclosing auction bidding information, including intent to participate in an auction, bidding strategy, and bid quantity information (17 CCR § 95914 (c)(1)). How should the Commission take this requirement into account in structuring the funding and budgeting for the Program?

29/ PG&E's Electric Preliminary Statement Part GB – Greenhouse Gas Revenue Balancing Account http://www.pge.com/nots/rates/tariffs/tm2/pdf/ELEC_PRELIM_GB.pdf.

30/ 2017 ERRA filing at Chapter 14, page 3.

PG&E does not believe that publicly disclosing information prohibited under 17 CCR § 95914 (c)(1) is relevant to the MAHSR budget formulation. GHG procurement activities are wholly separate from the activities related to the consignment and use of its customers' allowances. However, the IOUs currently file two versions of the ERRA application: a public and a confidential one. The public version contains ERRA forecast revenues of consigned allowances are based on a proxy price that can be used to determine an approximate program budget. Additionally, PG&E's proposal in Question 19d will allow the Commission to use public information from GHG auctions to set budget amounts. GHG procurement or consignment activities must adhere to the Confidentiality Protocol provided by Attachment A of D. 14-10-033,[31/] that outlines what GHG information that can be disclosed to the public and various qualified parties.

Question 22. The Commission is required to establish energy efficiency requirements for the Program.

a. How should such energy efficiency requirements be determined? Should the Commission simply adopt requirements equal to those in Section 2852? Why or why not?

b. If the Commission should adopt different energy efficiency requirements, how should those requirements be determined?

c. What documentation should applicants be required to provide of compliance with the requirements set in accordance with Section 2870(f)(7)?

See section II.H and response to Question 10 above.

Question 23. Should the Commission establish interim targets for the installation of capacity under the Program? Why or why not? How should such interim goals, if they are appropriate, be determined?

Until the budget issue has been straightened out, interim targets should not be included. Once the scale of the program budget has been determined, interim targets may be re-evaluated.

31/ D.14-10-033 – *Phase 2 Decision Adopting Standard Procedures for Electric Utilities to File Greenhouse Gas Forecast Revenue and Reconciliation Requests* – October 16, 2014.

Question 24. What types of data collection and reporting requirements should the Commission adopt for the Program? Please include a discussion of whether data from the Program should be reported on the Cal DG Stats website that is currently under development and intended to replace the current California Solar Statistics website.

Data collection should be similar to those requirements in the MASH program but should have further scrutiny in certain areas.

Because the contract prices will impact the need to file an advice letter in the event that incentive levels are not aligning with market prices, this data needs to be as accurate as possible. Therefore copies of the final contract signed by the building owner should be provided to the program administrator.

Question 25. What safety issues should be considered in the implementation of the Program? Please specify who should be responsible for meeting any safety requirements you identify (e.g., applicant, utility, supplier of solar energy system, etc.)

All requisite Rule 21 safety procedures for interconnection must be undertaken any time there is a generation device which parallels with the utility grid and thus all AB 693 PV projects will need to follow these procedures as well.

Question 26. Please identify and, if relevant, comment on any additional topics related to implementation of the Program that are not addressed in the questions above.

The Commission will need to resolve how to calculate funds available for this program.

The Legislature ordered the Commission to authorize the allocation of "one hundred million dollars … or *10 percent of available funds*, whichever is less." [Emphasis added] The source of the "available funds" is "the revenues described in subdivision (c) of Section 748.5" of the Public Utilities Code. Section 748.5(c) states:

> The commission may allocate up to 15percent of the revenues, including any accrued interest, received by an electrical corporation as a result of the direct allocation of greenhouse gas allowances to electrical distribution utilities pursuant to subdivision (b) of Section 95890 of Title 17 of the California Code of Regulations, for clean energy and energy efficiency projects established pursuant to statute that are administered by the electrical corporation, or a qualified third-party administrator as approved by the commission, and that are not otherwise funded by another funding source.

It is critical to note that the Legislature specifically called out subdivision (c). Section 748.5 determines how the CPUC should treat funds collected by the IOUs from the sale of GHG allowances. Funds are to be credited directly to customers with one exception. That exception, described in subdivision (c), allows the CPUC to allocate 15% of the funds for "clean energy and energy efficiency projects established pursuant to statute." Obviously AB 693 establishes such a program, and the Legislature has determined how much of the funding is allocated to this program, i.e., 10% of the available funds. There is simply no other way to interpret AB 693. Had the Legislature intended any other interpretation, it would not have specifically referred to subdivision (c) of Section 748.5. Consequently, when directed by the CPUC to reserve funds for this program through the ERRA proceeding, PG&E (and SCE and SDG&E) each reserved 10% of 15% of the funds available from sale of GHG allowances.[32/]

PG&E recognizes that the "10% of available funds … from the revenues described in subdivision (c) of 748.5" is likely to be well below the $100 million dollars mentioned at the beginning of section 2870(c). If it so desires, the CPUC might seek additional funding for this program from the Legislature. The CPUC could use such additional funding to augment the Multifamily Affordable Housing Solar Roofs Program, incorporating measures to address solar for low income customers not included in the program established by AB 693 (such as single family homes). As a result, the augmented MAHSRP would satisfy direction from the Legislature in both AB 693 and AB 327.[33/]

In addition, the CPUC might consider augmenting this funding with GHG funding disbursed by the Legislature because funding from a non-ratepayer source allows the program to serve more low income customers while minimizing the rate impacts for other customers. If the CPUC were to seek additional funding from the legislature from a source other than utility GHG

[32/] 2017 ERRA filing at Chapter 14.

[33/] PG&E here refers to the provision in 2827.1(b)(1) that the commission "include specific alternatives designed for growth among residential customers in disadvantaged communities."

allowance revenue, this would further the CPUC determination that it is appropriate to return allowance proceeds to customers as a bill credit.[34]

IV. CONCLUSION

PG&E thanks the Commission for the opportunity to provide these comments and encourages the Commission to adopt PG&E's proposal.

Respectfully submitted,

RANDALL J. LITTENEKER
STACY W. WALTER

By: */s/Randall J. Litteneker*
RANDALL J. LITTENEKER

Pacific Gas and Electric Company
77 Beale Street, B30A
San Francisco, CA 94105
Telephone: (415) 973-2179
Facsimile: (415) 973-0516
E-Mail: rjl9@pge.com

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

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[34] See discussion in D.15-10-032, pp. 33-36.